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AMENDMENTS TO THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier. Those claims not cancelled or withdrawn but amended by the current amendment utilize the following notations for amendment: 1. deleted matter is shown by strikethrough for six or more characters and double brackets for five or less characters; and 2. added matter is shown by underlining.

1. (Currently Amended) A medical implant to seal ~~for use in~~ a lumen or void of a body of a patient comprising:

a pharmaceutically acceptable covalently crosslinked hydrogel polymerized from at least one macromer,

the hydrogel having a substantially less than equilibrium level of hydration for undergoing a volumetric expansion of at least about 50% after swelling with physiological fluid and

having a size ~~shape~~ and a swellability ~~before implantation~~ to press against tissue surrounding the lumen or void upon swelling to seal and thereby occlude the lumen or void upon swelling from exposure to a fluid from the body ~~after implantation in the lumen or void~~,

wherein the hydrogel, at the substantially less than equilibrium level of hydration, having dimensions to pass through a tube having an inner diameter of no more than about 1.5 mm.

2. (Original) The implant of claim 1 wherein the volumetric expansion is between about 50% and about 700%.

3. (Original) The implant of claim 1 wherein the volumetric expansion is between about 100% and about 500%.

4. (Original) The implant of claim 1 wherein the volumetric expansion is between about 150% and about 400%.

5. (Original) The implant of claim 1 wherein the hydrogel is biodegradable.

6. (Original) The implant of claim 1 wherein the hydrogel comprises a crosslinked natural polymer.

7. (Original) The implant of claim 6 wherein the crosslinked natural polymer is a protein.

8. (Original) The implant of claim 7 wherein the protein is albumin.

9. (Withdrawn) The implant of claim 6 wherein the crosslinked natural polymer is a polysaccharide.

10. (Withdrawn) The implant of claim 6 wherein the polysaccharide is hyaluronic acid.

11. (Original) The implant of claim 1 wherein the fluid from the body is blood.

12. (Original) The implant of claim 1 wherein the macromer, before polymerization, comprises a synthetic hydrophilic polymer.

13. (Currently Amended) The implant of claim 1 wherein the hydrogel comprises a shape that is a member of the group consisting of a rod[[s]], a sphere[[s]], a block[[s]], a sheet[[s]], and a tube[[s]]~~, and irregularly shaped particles~~.

14. (Original) The implant of claim 1 wherein the macromer, before polymerization, comprises $CH_2CH_2OCH_2CH_2O$.

15. (Original) The implant of claim 14 wherein the hydrogel is biodegradable.

16. (Original) The implant of claim 1 wherein the hydrogel comprises at least a portion that is biphasic.

17. (Original) The implant of claim 1 the hydrogel comprises a hydrophobic liquid or a gas.

18. (Original) The implant of claim 1 wherein the hydrogel comprises bubbles.

19. (Previously Presented) The implant of claim 17 wherein the bubbles comprise carbon dioxide and mixtures thereof.

20. (Original) The implant of claim 1 wherein the lumen or void is created by a biopsy procedure.

21. (Original) The implant of claim 1 wherein the lumen or void is created by a needle.

22. (Original) The implant of claim 1 wherein the lumen or void is a member of the group consisting of a naturally occurring body passageway, a fallopian tube, an arteriovenous malformation, and a bone canal.

23. (Currently Amended) The implant of claim 1 wherein the shape, before hydration by physiological fluids, is dimensioned ~~suitable~~ to be deployed through a lumen of a catheter.

24. (Original) The implant of claim 1 wherein the macromer, before polymerization, comprises a functional group polymerizable by a polymerization reaction that is a member of the group consisting of free radical, condensation, anionic, cationic.

25. (Original) The implant of claim 1 wherein the hydrogel comprises macromers polymerized by an electrophile-nucleophile reaction.

26. (Original) The implant of claim 24 wherein the macromer, before polymerization, comprises a synthetic hydrophilic polymer.

27. (Original) The implant of claim 24 wherein the macromer, before polymerization, comprises $CH_2CH_2OCH_2CH_2O$.

28. (Currently Amended) The implant of claim 24 wherein the hydrogel ~~shape~~, before hydration by physiological fluids, is dimensioned to be deployed through a lumen of a catheter.

29. (Original) The implant of claim 24 wherein the hydrogel comprises at least a portion that is biphasic.

30. (Original) The implant of claim 1 wherein the hydrogel further comprises a hydrophobic agent.

31. (Original) The implant of claim 30 wherein the hydrophobic agent is present as a dispersion or suspension in the hydrogel.

32. (Withdrawn) The implant of claim 30 wherein the hydrophobic agent is water-immiscible.

33. (Withdrawn) The implant of claim 32 wherein the water-immiscible agent is an oil.

34. (Original) The implant of claim 30 wherein the macromer, before polymerization, comprises a synthetic hydrophilic polymer.

35. (Original) The implant of claim 30 wherein the macromer, before polymerization, comprises $CH_2CH_2OCH_2CH_2O$.

36. (Currently Amended) The implant of claim 30 wherein the hydrogel ~~shape~~, before hydration by physiological fluids, is dimensioned to be deployed through a lumen of a catheter.

37. (Original) The implant of claim 1 wherein the hydrogel further comprises a therapeutic bioactive molecule.

38. (Original) The implant of claim 37 wherein the therapeutic bioactive molecule is a member of the group consisting of peptides, antibiotics, antitumor agents, hemostatics, and analgesics.

39. (Original) The implant of claim 1 wherein the hydrogel further comprises a contrast agent.

40. (Original) The implant of claim 39 wherein the contrast agent is a radio-opaque contrast agent.

41. (Currently Amended) A medical implant for use in a lumen or void of a body that is created as by a percutaneous catheter puncture for access to an artery for exchange of catheters required through the puncture comprising:

a pharmaceutically acceptable covalently crosslinked hydrogel polymerized from at least one macromer,

the hydrogel, before implantation, having a size ~~shape~~ and a substantially less than equilibrium level of hydration for undergoing a volumetric expansion of at least about 50% in physiological fluid to thereby expand to occlude the lumen or void created by the percutaneous catheter puncture after swelling with fluid from the body,

wherein the hydrogel, at the substantially less than equilibrium level of hydration, having dimensions to pass through a tube having an inner diameter of no more than about 3 mm.

42. (Original) The implant of claim 41 wherein the macromer, before polymerization, comprises a synthetic hydrophilic polymer.

43. (Original) The implant of claim 41 wherein the macromer, before polymerization, comprises $CH_2CH_2OCH_2CH_2O$.

44. (Original) The implant of claim 41 wherein the hydrogel is biodegradable.

45. (Original) The implant of claim 41 wherein the hydrogel further comprises a therapeutic bioactive molecule.

46. (Original) The implant of claim 45 wherein the therapeutic bioactive molecule is a member of the group consisting of peptides, antibiotics, antitumor agents, hemostatics, and analgesics.

47. (Original) The implant of claim 41 wherein the hydrogel further comprises a contrast agent.

48. (Original) The implant of claim 41 wherein the volumetric expansion is between about 50% and about 700%.

49. (Original) The implant of claim 41 wherein the volumetric expansion is between about 100% and about 500%.

50. (Original) The implant of claim 41 wherein the volumetric expansion is between about 150% and about 400%.

51. (Original) The implant of claim 41 the hydrogel comprises a hydrophobic liquid or a gas.

52. (Original) The implant of claim 41 wherein the hydrogel comprises at least a portion that is biphasic.

53. (Currently Amended) A medical implant for use in a lumen or void of a body of a patient comprising:

a sterilized covalently crosslinked biodegradable hydrogel polymerized from at least one macromer,

the hydrogel having a size ~~shape~~ before implantation for passage through an inner diameter of no more than about 4 mm of a catheter or hollow needle into the body, and

having a substantially less than equilibrium level of hydration for undergoing a volumetric expansion of at least about 20% in physiological fluid to occlude the lumen or void after swelling with a fluid from the body.

54. (Original) The implant of claim 53 wherein the hydrogel further comprises a contrast agent.

55. (Original) The implant of claim 53 wherein the hydrogel comprises at least a portion that is biphasic.

56. (Original) The implant of claim 53 wherein the hydrogel further comprises a hydrophobic agent.

57. (Original) The implant of claim 56 wherein the hydrophobic agent is present as a dispersion or suspension in the hydrogel.

58. (Withdrawn) The implant of claim 56 wherein the hydrophobic agent is water-immiscible.

59. (Original) The implant of claim 58 wherein the macromer, before polymerization, comprises a synthetic hydrophilic polymer.

60. (Original) The implant of claim 58 wherein the macromer, before polymerization, comprises $CH_2CH_2OCH_2CH_2O$.

61. (Original) The implant of claim 53 wherein the hydrogel comprises at least a portion that is biphasic.

62. (Original) The implant of claim 53 wherein the hydrogel comprises bubbles.

63. (Previously Presented) The implant of claim 62 wherein the bubbles comprise carbon dioxide and mixtures thereof.

64. (Original) The implant of claim 53 wherein the lumen or void is created by a biopsy procedure.

65. (Original) The implant of claim 53 wherein the volumetric expansion is between about 50% and about 700%.

66. (Original) The implant of claim 53 wherein the volumetric expansion is between about 100% and about 500%.

67. (Original) The implant of claim 53 wherein the volumetric expansion is between about 150% and about 400%.

68. (Original) The implant of claim 53 further comprising a therapeutic bioactive molecule.

69. (Original) The implant of claim 68 wherein the therapeutic bioactive molecule is a member of the group consisting of peptides, antibiotics, antitumor agents, hemostatics, and analgesics.

Please add new claims 70-72 as follows:

70. (New) The implant of claim 1 wherein the hydrogel comprises a cylindrical roll.

71. (New) The implant of claim 41 wherein the hydrogel comprises a cylindrical roll.

72. (New) The implant of claim 53 wherein the hydrogel comprises a cylindrical roll.